

IN THE CLAIMS

Please replace any previous listing of the claims with the following replacement listing of the claims:

Replacement Listing of the Claims

1. (Currently amended) A method for using a computer to define, store and retrieve ~~processing~~ the data of an industrial process, said method comprising:

(a) operating said computer with a program in response to input data entered by a user to ~~identifying~~ one or more events and/or activities of said data of said industrial process and one or more attributes thereof;

(b) operating said computer with said program to ~~classifying~~ each of said events and/or activities and each of said attributes according to a data structure that comprises an event and/or activity type and a plurality of attribute types to provide defined event and/or activity types for said events and/or activities and defined attribute types for said attributes; and

(c) operating said computer with said program to allocate ~~allocating~~ one or more storage volumes of a database to each of said defined event and/or activity types for storage and retrieval of said data by said defined attribute type.

2. (Original) The method of claim 1, wherein step (c) allocates at least one storage volume to each of said defined attribute types.

3. (Original) The method of claim 2, wherein said data structure further comprises a time stamp, and wherein said at least one storage volume of a first one of said events is accessed according to said time stamp for storage and retrieval of said attributes corresponding to said first event.

4. (Original) The method of claim 2, wherein at least one attribute of a plurality of said events and/or activities is common to at least one of said defined attribute types, and wherein step (c) allocates said at least one storage volume to all of said common attributes.

5. (Currently amended) The method of claim 1, wherein step (c) allocates a first one of said storage volumes for storage of values of said data of said industrial process for said attributes of at least a first one of said defined attribute types, and further comprising compressing said data which is stored in said first one of said storage volumes according to identity of said values of said data of said attributes of consecutive events and/or activities that have been allocated for storage in said first one of said storage volumes.

6. (Currently amended) The method of claim 5, wherein said data structure further comprises a time stamp, and wherein said first one of said storage volumes is accessed according to said time stamp for storage and/or retrieval of said values of said data, and wherein said values of said data of a first event are retrieved from said first storage volume by using ~~the~~ a value of a first time stamp for said first event or of a second time stamp value of a second one of said events that is earlier in time than said first time stamp value.

7. (Original) The method of claim 1, wherein step (c) allocates a first one of said storage volumes for storage of values of said attributes of at least one of said defined attribute types, wherein said attributes of said at least one defined attribute type are static, and further comprising optimizing data storage in said first one of said storage volumes by omitting storage of a static value.

8. (Currently amended) The method of claim 1, wherein said industrial process is one of a plurality of industrial processes, and wherein steps (a), (b)

and (c) are performed for each of said plurality of industrial processes using said data structure.

9. (Currently amended) The method of claim 8, wherein at least two of said plurality of industrial processes are different from one another.

10. (Original) The method of claim 1, further comprising presenting data values of different ones of said events and/or activities that are defined as different event and/or activity types in any one of a plurality of formats.

11. (Original) The method of claim 10, wherein said plurality of formats are selected from the group consisting of: row format, column format and chart format.

12. (Original) The method of claim 1, further comprising developing a map structure for mapping diverse external names of said attributes and/or field contents thereof to a common internal attribute name and/or field content.

13. (Currently amended) A computer system ~~for processing that defines,~~ stores and retrieves the data of an industrial process comprising:

a processor, a database and a program that when executed performs the steps comprising:

~~means for~~ in response to input data entered by a user,
identifying one or more events and/or activities of said data of said
industrial process and one or more attributes thereof;

~~means for~~ classifying each of said events and/or activities and each of said attributes according to a data structure that comprises an event and/or activity type and a plurality of attribute types to provide defined

event and/or activity types for said events and/or activities and defined attribute types for said attributes; and

~~means for allocating one or more storage volumes of said database~~ to each of said defined event and/or activity types for storage and retrieval of said data by said defined attribute type.

14. (Currently amended) The computer system of claim 13, wherein said ~~means for allocating allocates at least one storage volume of said database is~~ allocated to each of said defined attribute types.

15. (Original) The computer system of claim 14, wherein said data structure further comprises a time stamp, and wherein said at least one storage volume of a first one of said events is accessed according to said time stamp for storage and retrieval of said attributes corresponding to said first event.

16. (Currently amended) The computer system of claim 14, wherein at least one attribute of a plurality of said events and/or activities is common to at least one of said defined attribute types, and wherein said ~~means for allocating allocates said at least one storage volume~~ is allocated to all of said common attributes.

17. (Currently amended) The computer system of claim 13, wherein said ~~means for allocating allocates a first one of said storage volumes~~ is allocated for storage of values of said data for said attributes of at least a first one of said defined attribute types, and further comprising compressing said data which is stored in said first one of said storage volumes according to identity of said values of said attributes of consecutive events and/or activities that have been allocated for storage in said first one of said storage volumes.

18. (Currently amended) The computer system of claim 17, wherein said data structure further comprises a time stamp, and wherein said first one of said storage volumes is accessed according to said time stamp for storage and/or retrieval of said values, and wherein said values of a first event are retrieved from said first storage volume by using the value of a first time stamp for said first event or of a second time stamp value of a second one of said events that is earlier in time than said first time stamp value.

19. (Currently amended) The computer system of claim 13, wherein said ~~means for allocating allocates a~~ first one of said storage volumes is allocated for storage of values of said attributes of at least one of said defined attribute types, wherein said attributes of said at least one defined attribute type are static, and further comprising optimizing data storage in said first one of said storage volumes by omitting storage of a static value.

20. (Currently amended) The computer system of claim 13, wherein said industrial process is one of a plurality of industrial processes, and wherein said ~~means for classifying provides for each of said plurality of~~ industrial processes is classified for defined event and/or activity types and defined attribute types using said data structure.

21. (Currently amended) The computer system of claim 20, wherein at least two of said plurality of industrial processes are different from one another.

22. (Currently amended) The computer system of claim 13, wherein said program further ~~comprising means for presenting~~ data values of different ones of said event and/or activities that are defined as different event and/or activity types in any one of a plurality of formats.

23. (Original) The computer system of claim 22, wherein said plurality of formats is selected from the group consisting of: row format, column format and chart format.

24. (Currently amended) ~~†~~The computer system of claim 13, wherein said program further comprising means for developing a map structure for mapping diverse external names of attributes and/or field contents thereof to a common internal attribute name and/or field content.

25. (Currently amended) A memory media for controlling a computer that ~~processes~~ defines, stores and retrieves the data of an industrial process, said memory media comprising:

one or more first means-program instruction that for controlling said computer to identify one or more events and/or activities of said data of said industrial process and one or more attributes thereof;

one or more second means-program instructions that for controlling said computer to classify each of said events and/or activities and each of said attributes according to a data structure that comprises an event and/or activity type and a plurality of attribute types to provide defined event and/or activity types for said events and/or activities and defined attribute types for said attributes; and

one or more third means-program instructions that for controlling said computer to allocate one or more storage volumes of a data base to each of said defined event and/or activity types for storage and retrieval of said data by defined attribute type.